Bufo philippinicus. (Pl. X. fig 5.)

Cranial ridges rather similar to those of *B. biporcatus* (*cf.* Boul. Cat. Batr. Ecaud. p. 311, fig.); but the supraorbital ridge ending in a very short branch, directed inwards and distinct from the parietal, which is more thickened. Snout short, truncate; canthus rostralis prominent; interorbital space broader than the upper eyelid; tympanum very distinct, vertically oval, smaller than the eye—the vertical diameter of the right side is $4\frac{1}{2}$ millim., of the left side 4 millim., and the horizontal diameter of the eye $6\frac{1}{2}$ millim. First finger extending much beyond second; toes half-webbed, with simple subarticular tubercles; no tarsal fold. The tarso-metatarsal articulation reaches the eye. Upper parts with small, conical, spiny tubercles; parotoids oval, as long as their distance from the anterior border of the orbit. Olive above, with darker insuliform spots; cranial ridges reddish brown.

The unique female specimen measures 75 millim. from snout to vent.

XLIII.—*On new Siluroid Fishes from the Andes of Columbia.*

By G. A. Boulenger.

A small collection of Fishes made by Mr. F. A. Simons in Columbia (locality not mentioned), and purchased a few years ago by the Trustees of the British Museum, consists of five species, viz.:—*Trichomycterus dispar*, Tsch. (*maculatus*, C. & V.), *T. tænia*, Kner, and the three novelties of which descriptions follow.

Stygogenes Guentheri.

D. 1/6. A. 6. P. 1/9–10. V. 1/4.

Head as broad as long, two sevenths of the total length (without caudal). Eyes very small, about one fourth the width of the interorbital space, midway between the anterior nostril and the posterior border of the head. Barbel not quite half the length of the head. Dentition and labial folds as in *S. Humboldtii*. A small rough spine to the adipose fin; sometimes another at the base of the caudal. Outer ray of each paired fin thickened, flexible, slightly prolonged, covered with small spines directed backwards; outer pectoral ray

longer than ventral, extending to the middle of the latter. Origin of the dorsal fin just behind the ventrals. Male with a long anal tube, and the posterior anal rays agglomerated and stiff. Pale olive-brown above, spotted or marbled with blackish brown.

Eight specimens, the largest measuring 83 millim.

Chætostomus setosus.

D. 1/7–8. A. 1/3. P. 1/6. V. 1/5. L. lat. 25.

Head large, much depressed, as long as broad, its length being one third of the total (without caudal); occipital and nuchal regions flat. Eye small, its diameter one third the width of the interorbital space. Margin of the snout granulated, with short and fine bristles in the female and long and strong ones in the male; interopercular spines numerous and strong, setiform, curved at their extremity, the hindermost the largest and measuring half the length of the snout. Scutes spiny, the spines being arranged in lines, not keeled; no distinct posthumeral ridge. Thorax and belly naked. Dorsal fin a little longer than high; the anterior rays measure two thirds the length of the head; the length of its base is less than its distance from the caudal; four or five scutes between the two dorsal fins. Caudal fin not forked, lower rays longest. The pectoral spine extends to beyond the base of the ventral, which extends to the anal. Eleven or twelve scutes between anal and caudal. Olive above, indistinctly spotted with darker; fins yellowish, with round black spots; lower parts uniform yellowish.

Total length 120 millim.

Two specimens, male and female.

Trichomycterus nigromaculatus.

D. 8. A. 6. P. 9. V. 5.

Head as broad as long, six and a half times in the total length. The depth of the body contained eight and a half times in the total length. Eye very small, one fourth the length of the snout, one third the width of the interorbital space. The nasal barbel extends to the occiput, the upper maxillary to the base of the pectoral. Opercular and interopercular prickles strong. Upper ray of the pectoral prolonged into a short filament. Origin of the dorsal fin in the middle of the total length. Anal fin entirely behind the

dorsal, which is considerably behind the base of the ventrals. Caudal not forked. Pale brown above, with numerous black spots of unequal size.

Total length 135 millim.

Two specimens.

XLIV.—*On the Reproductive Elements of the Spongida.*

By H. J. Carter, F.R.S. &c.

It is not necessary now to question whether the Spongida are propagated by male and female elements of generation, that is by spermatozoa and ova in the usual way, as so many have described and illustrated these elements in different species of the class, beginning as far back at least as 1826, when Grant described and delineated the ova in *Spongia panicea* and *S. papillaris*, now *Halichondria incrustans* and *H. panicea*, Bk. (Edinburgh New Phil. Journ. vol. ii. p. 127 &c. pl. ii. fig. 26 &c.), and 1856, when Lieberkühn described and illustrated the spermatozoa in *Spongilla* (Archiv f. Anat. u. Physiol. Heft i. p. 17, and Heft v. p. 500, Taf. xviii. figs. 9 and 10). But still it remains to be pointed out from what parts of the sponge these elements are respectively derived.

Following the discoveries as they were made, let us first direct our attention to the ovum.

By "ovum" I wish to be understood to mean that stage in which this element is chiefly characterized by the *presence* of the germinal vesicle; the segmentary stage, that in which it is chiefly characterized by the *absence* of the germinal vesicle; and the embryonic state, that in which it is chiefly characterized by the addition of cilia or motory organs to the surface.

At the earliest period in which I could detect the ovum (in *Halichondria lobularis*) it was about 1-3000th in. in diameter, which was thus but a little larger than the spongozoon ("Geissel-" or "Kragenzell" of the Germans); while later on, that is when about 1000th in. in diameter, it presented all the characters of an unimpregnated sponge-ovum—that is, presenting the germinal vesicle and germinal spot surrounded by a polymorphic or amœboid envelope, in which state it then appeared to me *in* the substance of the sponge ('Annals,' 1874, vol. xiv. pp. 329 and 350, pl. xx. fig. 3, *a–c*).

Now, as the monociliated spongozoon of the ampullaceous sac (a certain time after having been separated from its con-